



Bill of Materials for the STR-LV8548MC-GEVK Evaluation Board

Designator	Quantity	Description	Value	Voltage	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C7	2	Generic 0603-1210 SMD Capacitor	DNI	25V	0603-1210	0603-1210			Yes	Yes
C2 C9 C19	3	CAP CER 10UF 25V X5R 0603	10uF	25V	0603	0603	Murata	GRM188R61E106MA73	Yes	Yes
C3 C4	2	Generic THT Capacitor	100uF	25V	Radial 6.3x2.5mm	Radial 6.3x2.5mm	Würth	860020573008	Yes	Yes
C5 C10	2	Generic 0402 SMD Capacitor	1nF	50V	0402	0402	Yageo	CC0402KRX7R9BB102	Yes	Yes
C6 C8 C11 C14 C17 C23 C29 C31	8	CAP CER 1UF 16V X5R 0402	1uF	16V	0402	0402	Murata	GRM155R81C105KA12	Yes	Yes
C12 C13	2	Generic 0603 SMD Capacitor	10nF	100V	0603	0603	Murata	GCM188R72A103KA37	Yes	Yes
C15 C16 C20 C21 C22 C30	6	CAP CER 4.7UF 6.3V X5R 0402	4.7uF	6.3V	0402	0402	Murata	GRM155R60J475ME47	Yes	Yes
C18 C28	2	CAP CER 0.1UF 50V X7R 0402	0.1uF	50V	0402	0402	Murata	GCM155R71H104ME02	Yes	Yes
C24 C25	2	CAP CER 7.5PF 50V C0G/NP0 0402	7.5pF	50V	0402	0402	Murata	GJM1555C1H7R5CB01D	Yes	Yes
C26 C27	2	CAP CER 12PF 50V C0G/NP0 0402	12pF	25V	0402	0402	Murata	GJM1555C1H120JB01D	Yes	Yes
D1 D2 D3 D4 D5 D6	6	Red LED	150060RS75000	2V	0603	0603	Würth Elektronik	150060RS75000	Yes	Yes
D7 D8 D9 D10	4	Yellow LED	150060YS75000	2V	0603	0603	Würth Elektronik	150060YS75000	Yes	Yes
D11	1	Yellow LED	150060YS75000	5V	0603	0603	Würth Elektronik	150060YS75000	Yes	Yes
D12	1	Blue LED	150060BS75000	5V	0603	0603	Würth Elektronik	150060BS75000	Yes	Yes
D13	1	Green LED	150060GS75000	5V	0603	0603	Würth Elektronik	150060GS75000	Yes	Yes
D14	1	Red LED	150060RS75000	5V	0603	0603	Würth Elektronik	150060RS75000	Yes	Yes
D15	1	ESD Protection Diodes	ESD7L	5.5V	SOT-723	SOT-723	ON Semiconductor	ESD7L5.0	No	Yes
D16 D17	2	Schottky Barrier Diode, 2.0 A, 20 V	NSR20F20NX	20V	DSN2 0603	DSN2 0603	ON Semiconductor	NSR20F20NX	No	Yes
FB1	1	Ferrite bead/Impedance type filter	220@100M		0805	0805	Murata	BLM21AG221SN1	Yes	Yes
J1 J11 J15	3	Standard 1x2pin 100mil Pitch Header	613 002 111 21		1x2pin 100mil	1x2pin 100mil	Würth Elektronik	613 002 111 21	Yes	Yes
J2 J3 J16 J17	4	M3 x 6mm Nylon Machine Screw, Black	SCW-NLB/M3x6		M3 6MM	M3 6MM	Electronics-Salon	SCW-NLB/M3x6	Yes	Yes
J4 J5	2	M2 x 4mm Stainless Steel Machine Screw, Black	92000A011		M2 4mm	M2 4mm	McMaster-Carr	92000A011	Yes	Yes
J6 J9	2	2pin screw SIDE ENT 2.54MM PCB	282834-2		2pin Screw 2.54mm	2pin Screw 2.54mm	TE Connectivity	282834-2	Yes	Yes
J7 J10	2	PC TEST POINT COMPACT	5016		Test Loop	Test Loop	Keystone	5016	Yes	Yes
J8 J14	2	M3 x 4mm Stainless Steel Machine Screw	92000A113		M3 4mm	M3 4mm	McMaster-Carr	92000A113	Yes	Yes
J12	1	4pin screw SIDE ENT 2.54MM PCB	282834-4		4pin Screw 2.54mm	4pin Screw 2.54mm	TE Connectivity	282834-4	Yes	Yes
J13	1	4 Pos 2mm pitch with keyed shroud	B4B-PH-K-S		4pin 2mm	4pin 2mm	JST Sales America Inc	B4B-PH-K-S	Yes	Yes
J18 J19 J25 J26	4	PLASTIC SPACER STUD METRIC THREAD M3 30MM F-F	970300365		M3 30MM	M3 30MM	Würth	970300365	Yes	Yes
J20	1	Red Insulated 4mm socket for banana plugs	571-0500		Red Banana Rec	Red Banana Rec	Deltron	571-0500	Yes	Yes
J21	1	DC Power Jack Right Angled THT	694106301002		Barrel Connector	Barrel Connector	Würth Elektronik	694106301002	Yes	Yes
J22	1	Black Insulated 4mm socket for banana plugs	571-0100		Black Banana Rec	Black Banana Rec	Deltron	571-0100	Yes	Yes
J23	1	Standard Arm Cortex Debug Connector	FTSH-105-01-F-DV-K		2x5pin 50mil Cortex Debug	2x5pin 50mil Cortex Debug	Samtec	FTSH-105-01-F-DV-K	Yes	Yes

J24	1	Mini USB1/2 Type-B Connector	65100516121		Mini USB1/2 B	Mini USB1/2 B	Würth Elektronik	65100516121	Yes	Yes
JP1 JP2	2	Surface Mount High Current Jumper Chip Resistor	DNI		0603	0603	Stackpole Electronics	HCJ0603ZTOR00	Yes	Yes
JP3	1	Surface Mount High Current Jumper Chip Resistor	DNI		0402	0402	Stackpole Electronics	HCJ0402ZTOR00	Yes	Yes
M1	1	24V DC Brushed Motor	PWN10VEE24AA		20.4x15.4mm	20.4x15.4mm	NMB Technologies Corporation	PWN10VEE24AA	Yes	Yes
M2	1	12V Stepper Motor	PM35S-048-367	12V	50x35mm	50x35mm	Goot Motor	PM35S-048-367	Yes	Yes
Q1 Q2 Q3	3	Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2N7002W	60V	SOT-323	SOT-323	ON Semiconductor	2N7002W	No	Yes
R1 R2	2	Generic 1206 SMD Resistor	0.015		1206	1206	Stackpole Electronics	CSR1206FK15L0	Yes	Yes
R3	1	RES SMD 100 OHM 1% 1/10W 0603	100		0603	0603	Vishay	CRCW0603100RFK	Yes	Yes
R4 R7	2	RES SMD 2.61K OHM 1% 1/16W 0402	2.61K		0402	0402	Vishay Dale	CRCW04022K61FK	Yes	Yes
R5 R6	2	RES SMD 3.01K OHM 1% 1/10W 0603	3.01K		0603	0603	Vishay Dale	CRCW06033K01FK	Yes	Yes
R8 R11	2	RES SMD 13.3K OHM 1% 1/16W 0402	13.3K		0402	0402	Vishay	CRCW040213K3FK	Yes	Yes
R9 R10	2	RES SMD 2.49K OHM 1% 1/16W 0402	2.49K		0402	0402	Vishay	CRCW04022K49FK	Yes	Yes
R12 R13 R19 R20	4	RES SMD 4.75 OHM 1% 1/10W 0603	4.75		0603	0603	Vishay	CRCW06034R75FK	Yes	Yes
R14 R15 R16 R17 R18 R21 R27 R30 R31 R32 R33	11	RES SMD 5.11K OHM 1% 1/16W 0402	5.11K		0402	0402	Vishay	CRCW04025K11FK	Yes	Yes
R22	1	RES SMD 665 OHM 1% 1/16W 0402	665		0402	0402	Vishay	CRCW0402665RFK	Yes	Yes
R23 R34	2	RES SMD 10K OHM 1% 1/16W 0402	10K		0402	0402	Vishay	CRCW040210K0FK	Yes	Yes
R24	1	RES SMD 9.76K OHM 1% 1/16W 0402	9.76K		0402	0402	Vishay	CRCW04029K76FK	Yes	Yes
R25	1	RES SMD 8.87K OHM 1% 1/16W 0402	8.87K		0402	0402	Vishay	CRCW04028K87FK	Yes	Yes
R26 R29	2	RES SMD 100 OHM 1% 1/16W 0402	100		0402	0402	Vishay	CRCW0402100RFK	Yes	Yes
R28	1	RES SMD 2.32K OHM 1% 1/16W 0402	2.32K		0402	0402	Vishay	CRCW04022K32FK	Yes	Yes
SW1	1	SWITCH TACTILE SPST-NO 0.05A 12V	434153017835	12V	MOM1 SMD	MOM1 SMD	Würth Elektronik	434153017835	Yes	Yes
TP1 TP2 TP3 TP4 TP5 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP15 TP16 TP17 TP18 TP20 TP21 TP22 TP23 TP24 TP25	23	Passive Probe Tip Tektronix P5050B (Black) Tip	DNI		0.9mm	0.9mm			Yes	Yes
TP6 TP19	2	63mil Hole 100mil Pad	DNI		63mil	63mil			Yes	Yes
TP26 TP27 TP28 TP29 TP31	5	Surface Mount 1mm Circle Test Point	DNI		1mm Circle	1mm Circle			Yes	Yes
TP30 TP32 TP33 TP34 TP35	5	Passive Probe Tip Tektronix P5050 (Tan) Tip	DNI		0.75mm	0.75mm			Yes	Yes
U1 U2	2	Motor Driver, Forward/Reverse, Low Saturation Voltage, 12V	LV8548		SOIC-10	SOIC-10	ON Semiconductor	LV8548MC	No	Yes
U3 U4	2	Current-Shunt Monitor, Voltage Output, Bi-Directional Zero-Drift, Gain = 100V/V	NCS214R		SC-70-6	SC-70-6	ON Semiconductor	NCS214RSQT2G	No	Yes
U5	1	EFM32 Giant Gecko 32-bit Microcontroller	EFM32GG380F1024		QFP100 14x14	QFP100 14x14	Silicon Labs	EFM32GG380F1024G-E-QFP100R	Yes	Yes
U6	1	USB to BASIC UART IC	FT230X		QFN16 4x4	QFN16 4x4	FTDI	FT230XQ-R	Yes	Yes
U7	1	3.3V Voltage Regulator, LDO, Ultra Low Noise, Ultra Low Iq, 500 mA	NCP705		WDFN6	WDFN6	ON Semiconductor	NCP705MT33TCG	No	Yes
Y1	1	Crystals 32.768 kHz 12.5 pF +/- 20 PPM -40/+85C	32.768 kHz		2 pin w/ shell	2 pin w/ shell	Micro Crystal	MS3V-T1R-32.768kHz-12.5pF-20PPM-TA-QC-Au	Yes	Yes
Y2	1	CRYSTAL 48.0000MHZ 8PF SMD	48MHz		5x3.2mm	5x3.2mm	NDK	NX5032GA-48.000000MHZ-LN-CD-1	Yes	Yes
	1	Wire for DC motor positive terminal			Red wire	Red wire	CNC Tech	1430-26-1-0500-004-1-TS	Yes	Yes
	1	Wire for DC motor negative terminal			Black wire	Black wire	CNC Tech	1430-26-1-0500-001-1-TS	Yes	Yes
Hex nut for stepper motor mounting	2	Hex nut for J8 and J14			M3 hex nut	M3 hex nut	McMaster-Carr	90592A085	Yes	Yes
100x Small flathead screwdriver for EVK	0.01	Small flathead screwdriver for EVK			Screwdriver	Screwdriver	-		Yes	Yes
USB-A to USB-B Mini 3 ft	1	USB-A to USB-B Mini 3 ft			USB cable	USB cable	Monoprice	3896	Yes	Yes
5x 12V 1A adapter	0.2	DC12V 1A UL-Listed Switching Power Supply Adapter			12V Adapter	12V Adapter	JC-Tech		Yes	Yes